

DETAILED ACTION

1. The applicant's amendment filed 7/7/09 has been considered. Claims 1, 4-5, 9, 11-14, 16-17, 19, 32-33, and 35-37 are presented for examination. Claims 2-3, 6-8, 10, 15, 18, and 20-31, 34 have been canceled.

2. The amendment filed 4/22/08, 09/30/08, 12/29/08, and 7/7/09 are objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: no where in the specification teaches the combination of an embodiment directed to a request to copy data with the other embodiment directed to firmware command and the combination of firmware command with dual write flag or bit as shown in fig. 6. Also, the specification failed to provide support "check dual write command for address spread" figs. 4-6. Applicant is required to cancel the new matter in the reply to this Office Action.

3. Claims 1, 4-5, 9, 11-14, 16-17, 19, 32-33, and 35-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, no where in the specification teaches the combination of an

embodiment directed to a request to copy data with the other embodiment directed to firmware command and the combination of firmware command with dual write flag or bit as shown in fig. 6. Also, the specification failed to provide support "check dual write command for address spread" figs. 4-6.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, claim 1, "receiving a dual write command to write information to the storage device, "performing a single reading of the information to be written," "an address spread within the dual write command;" claim 4, "bit flag" claim 5, ". . . header . . . "; claim 32, "dual write command is hard drive firmware command;" claim 37, 'reserve area . . . operating system" and claim 14 has similar problems as discussed above must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4-5, 9, 11-14, 16-17, 19, 35, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Paterson et al., U.S. Patent No. 6,412, 042.

As per claim 1, Paterson teaches a method of writing information to a storage device, the method, implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20);

determining two locations on the storage device to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col.11, line 60 to col. 12, line 20);

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20);

wherein the read buffer of the storage device is not cleared between the writing of the information to both of the two locations (e.g., col. 11, line 60 to col. 12, line 20);

wherein a first one of the two locations is within a reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20) and a second one of the two locations is outside of the reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20).

Wherein one of said two locations is determined based on an address spread within the dual write command (e.g., col. 7, lines 25-45, address identifier).

claim 14, Patterson teaches a method of writing information to a single disk drive storage device, the method comprising:

receiving a command to write information to the single disk drive storage device (e.g., col. 11, line 60 to col. 12, line 20);

determining if the command is a dual write command(e.g., col. 11, line 60 to col. 12, line 20);

if the command is a dual write command:
determining two locations on the single disk drive storage device to write the information(e.g., col. 11, line 60 to col. 12, line 20);
reading the information to be written into a read buffer(e.g., col.11, line 60 to col. 12, line 20); and
writing the information to both of the two locations on the single disk drive storage device based upon a single reading of the information(e.g., col. 11, line 60 to col. 12, line 20);
said locations being determined based on an address spread within the dual write command(e.g., col. 7, lines 25-45, address identifier).

As per claims 4-5, 9, and 11-13, Paterson teaches the information to be read being associated with a write command designated a dual write operation (e.g., col. 11, line 60 to col. 12, line 20) and a bit flag is inherently taught by Paterson because in a computer system, a command or data is recognized by a bit flag, such as a write bit flag; the storage device comprising a disk drive (e.g., fig. 1, el. 10); the information to be read contains a header designating a dual write operation (i.e., a write command is a header of data segment, e.g., fig. 12, el. 140; col. 11, line 60 to col. 12, line 20); the information is written to both of the locations during a same write cycle (e.g., col. 12, lines 1-20); the two locations comprise a first location and a second location based, the second location being upon a calculation performed on the first location (i.e., selecting the second location being upon comparing access time or error performed on the first

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location; e.g., col. 8, lines 50-60; col. 18, lines 35-45); and writing the information to both locations comprises writing the information to a plurality of locations comprising both locations and at least one additional location (e.g., col. 14, line 55 to col. 15, line 20).

Claims 35 and 36, Paterson teaches the reserve area of the storage device is determined prior to the writing of the information to both of the two locations (i.e., the addresses of the two locations, data and duplicate copy locations are determined prior to the writing of the information to both of the two locations; e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20); access to the first one of the two locations in the reserve area is not dependent upon accessibility of the second one of the two locations outside of the reserve area of the storage device (i.e., access to the two locations depends on time stamp or recently data; e.g., col. 7, lines 25-45).

Claims 16-17, 19, Paterson teaches wherein the read buffer of the storage device is not cleared between the writing of the information to both of the two locations (e.g., col. 11, line 60 to col. 12, line 20); wherein the reserve area is a protected area that is protected from access by a host command (i.e., one of two areas is protected from retrieve data by host command until the other one has an error e.g., col. 11, lines 15-25; col. 18, lines 25-65 and et seq.) and a user is inherently taught by Paterson, col. 11, lines 15-25 because a host command or instruction is generated by a user or a host is controlled by a user; data is first written into a location having a lower address than the location at which the data is written a second time (e.g., col. 45, lines 45-55).

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7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paterson et al., US 6,412,042 (hereinafter Paterson), and further in view of Cheston et al. US patent No. 6,167,494 (hereinafter Cheston).

Claims 33 and 37, Paterson does not explicitly show the reserve area is not accessible using the operating system; the reserve area is not within the comprehension of the operating system. Cheston shows the reserve area is not accessible using the operating system (e.g., col. 3, lines 1-10); the reserve area is not within the comprehension of the operating system (e.g., col. 3, lines 1-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Cheston into the method of Paterson because it would increase data reliability by recovery data from the reserve area which is not accessible using the operating system.

9. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paterson et al., US 6,412,042 (hereinafter Paterson), and further in view of Assaf US patent No. 5,966,732 (hereinafter Cheston).

As per claim 32, Paterson teaches wherein the reserve area is a protected area that is protected from access by a host command (i.e., one of two areas is protected from retrieve data by host command until the other one has an error e.g., col. 11, lines 15-25; col. 18, lines 25-65 and et seq.) and a user is inherently taught by Paterson, col. 11, lines 15-25 because a host command or instruction is generated by a user or a host is controlled by a user; and Paterson does not explicitly show wherein the dual write command is a hard drive firmware command. Assaf shows a command is a hard drive firmware command (e.g., col. 3, lines 15-20; col. 5, lines 20-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Assaf into the method of Paterson because it would provide an easy in updating firmware comparing to hardware.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise Tran whose telephone number is (571) 272-4189. The examiner can normally be reached on Monday, Thursday, and an alternated Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon, can be reached on 571-272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Denise Tran/

Primary Examiner, Art Unit 2189